CONTENTS VOLUME 60

Special Issue: Electromagnetic Induction Studies
Guest Editors: R.D. Kurtz, A.G. Jones, A. Ádám and M.S. Zhdanov

Contents vii
Introduction ix

Modelling studies
A three-dimensional numerical study of induction in Southern India by an electrojet source
A.K. Agarwal and J.T. Weaver (Victoria, BC, Canada) 1
Comparison of analogue model and field station EM responses on Southern Vancouver Island
H.W. Dosso, J. Chen and W. Nienaber (Victoria, BC, Canada) 18
An analogue model study of EM induction in the North China–Korea coastal region
Z. Meng, H.W. Dosso and W. Nienaber (Victoria, BC, Canada) 25
An iterative scheme for use in MT 2D forward modelling—to speed up production of the Jacobian and to improve accuracy of the inverse matrix
A.J. Zhang, E.R.G. Hill and B.A. Hobbs (Edinburgh, U.K.) 40
Numerical modeling of EM fields over local anomalies with a vertical axis of symmetry
M.S. Zhdanov, V.V. Spichak and L.Yu. Zaslavsky (Troitsk, U.S.S.R.) 53

Data processing
A comparison of windows and maximum entropy methods for MT transfer function estimation
C.E. Moyano (Mendoza, Argentina) and A.M. Osella (Capital Federal, Argentina) 62

Inversion
The solution of the one-dimensional inverse problem for induction soundings by an efficient linearization technique
L.N. Porokhova and M.M. Kharlamov (Leningrad, U.S.S.R.) 68

Interpretation including distortion studies
Distortions of the electromagnetic field by shallow basins and by resistive outcrops
A. Ádám (Sopron, Hungary) and G. Varga (Budapest, Hungary) 80
Magnetotelluric measurements in Antarctica
M. Beblo and V. Liebig (Fuerstenfeldbruck, F.R.G.) 89
Limitations of the unimodal thin sheet modelling of near-surface inhomogeneities in Czechoslovakia
V. Červ, J. Pek and O. Praus (Bočňi, Czechoslovakia) 100
Summary of electromagnetic investigations in the western part of the Black Sea
S.M. Korotaev, I.L. Trofimov, S.V. Shabelyansky, M.S. Zhdanov, A.I. Lapitsky, S.I. Sanin and E.R. Martanus (Troitsk, U.S.S.R.) 115
A magnetotelluric investigation of the structural geology beneath Charlevoix Crater, Quebec
M. Mareschal and M. Chouteau (Montreal, Canada) 120
A gap in the North American Central Plains conductivity anomaly
D. Rankin and F. Pascal (Edmonton, Alb., Canada) 132

A geoelectric section across Ireland from magnetotelluric soundings
J.P. Whelan, C. Brown (Galway, Ireland), V.R.S. Hutton and G.J.K. Dawes (Edinburgh, U.K.) .. 138
The Continental Slope Experiment along the Tasman Project profile, southeast Australia
A. White (Bedford Park, S.A., Australia), R.L. Kellett and F.E.M. Lilley (Canberra, ACT, Australia) 147

Comparisons with other geophysical results
A new approach to the electrical conductivity anomalies in the Drauzug–Bakony geological unit
A. Ádám (Sopron, Hungary), G. Duma (Wien, Austria) and J. Horváth (Sopron, Hungary) 155
Crustal and upper mantle structure of the Mediterranean area derived from surface-wave data
G. Calcagnile (Bari, Italy) and G.F. Panza (Trieste, Italy) 163
The North America Central Plains conductivity anomaly and its correlation with gravity, magnetic, seismic, and heat flow data in Saskatchewan, Canada
A.G. Jones and J.A. Craven (Ottawa, Ont., Canada) 169
A comparative study of results obtained in magnetotelluric deep soundings in Villarrica active volcano zone (Chile) with gravity investigations, distribution of earthquake foci, heat flow empirical relationships, isotopic geochemistry $^{87}Sr/^{86}Sr$ and SB systematics
M. Muñoz (Santiago, Chile), H. Fournier, M. Mamani, E. Borzotta, A. Maidana (Mendoza, Argentina) and J. Febrer (Buenos Aires, Argentina) 195
Magnetotelluric and seismological determination of the lithosphere–asthenosphere transition in Central Europe
O. Praus, J. Pěčová, V. Petr, V. Babuška and J. Plomerová (Prague, Czechoslovakia) 212
Magnetotelluric sounding and geothermics in Central and Eastern Europe: a comparison
L. Stegena (Kun Béla tér, Hungary) 229
A magnetotelluric profile of the Wind River Thrust, Wyoming
C.T. Young and E.R. Hepp (Houghton, MI, U.S.A.) 231

Letter section
Centroid-moment tensor solutions for April–June 1989
A.M. Dziewonski, G. Ekström, J.H. Woodhouse and G. Zwart (Cambridge, MA, U.S.A.) 243

Research Papers
Thermoelastic deformation of a transversely isotropic and layered half-space by surface loads and internal sources
E. Pan (Beijing, People's Republic of China) 254
On the behaviour of the induction arrows over a buried conductive plate—a numerical model study
A.K. Agarwal and H.W. Dosso (Victoria, B.C., Canada) 265
Archaeomagnetic studies on some archaeological sites in Tamil Nadu, India
K. Ramaswamy and D. Duraiswamy (Tamil Nadu, India) 278
Three-dimensional velocity inversion of teleseismic P-wave residuals from the telemetric network of the G.D.R.
K. Wylegalla and P. Bormann (Potsdam, G.D.R.) 285
Mineral magnetic characteristics of podzolic soils developed on sand dunes in the Lake Gosciaz catchment, central Poland
P. Sandgren (Lund, Sweden) and R. Thompson (Edinburgh, Gt. Britain) 297
Global stress pattern constrained on deep mantle flow and tectonic features
R.-S. Fu and J.-H. Huang (Anhui, People's Republic of China) 314

Crustal deformations associated with the 1986 fissure eruption of Izu-Oshima volcano, Japan, and their tectonic significance
M. Hashimoto and T. Tada (Ibaraki, Japan) 324

Contents of Volume 60 339